

## ABSTRACT OF THE DISCLOSURE

The present invention provides a processor that can prevent a supervisor program from being executed incorrectly by a user program so as  
5 to ensure security and can improve the real time performance for a valid branch from the user program to the supervisor program. The processor 400 includes a CPU 401, a flash memory 404 for storing a program, and a invalid branch detection circuit 409. When branch instruction that  
10 changes an operation mode to another operation mode is executed by the program stored in the flash memory 404, the invalid branch detection circuit 409 determines whether there is a branch enable instruction in a branch destination address. In the absence of the branch enable instruction, the invalid branch detection circuit 409 outputs an invalid branch detection  
15 signal, thus preventing the supervisor program from being executed incorrectly by the user program.